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(54) MEASURING INSTRUMENT FOR
CHARACTERISTIC OF SEMICONDUCTOR LIGHT
EMITTING ELEMENT

(57) Abstract:

PURPOSE: To execute the measurement with high accuracy extending over the wavelength of a wide range by correcting an output value of a photoelectric converting device in accordance with a photodetecting sensitivity to wavelength characteristic stored in a memory, and correcting and measuring an optical output or a driving current.

CONSTITUTION: In front of a semiconductor laser 10 connected to a power source 15, a photodetector 11 and a spectrum analyzer 12 are placed, and a light beam from the laser 10 is made incident on them through an optical path switching device 13. First of all, prior to the measurement, the center wavelength in a lot of a product is inputted, and an output of the photodetector 11 is corrected. Subsequently, a driving current value is increased until a determined constant optical output P_0 is outputted, and the driving current value at the time when the constant optical output is obtained is denoted as IOP_1 . Next, in a state that the current value is held in IOP_1 , a signal is sent to the device 13, an optical path is switched to the analyzer 12 side and wavelength λ_1 is measured. Next, sensitivity by λ_1 is read from a memory, the output of the photodetector 11 is corrected, and thereafter, the current value IOP is

varied until the output PO is outputted, and when a difference between a current value IOP_2 at the time when the determined optical output is obtained and IOP_1 becomes smaller than a set value, it is outputted to a device 17.

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